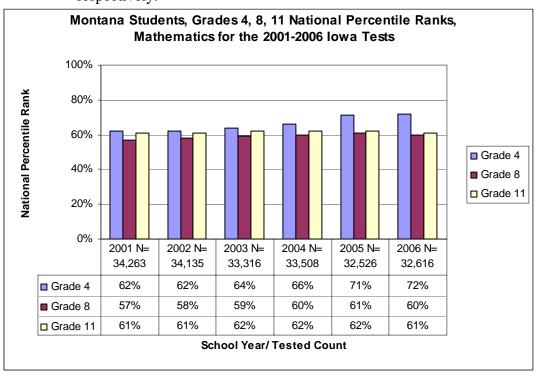
## Mathematics, Grades 4, 8, and 11

## Chart 1: 4, 8, 11 M

The chart below shows the National Percentile Ranks for grades 4, 8, and 11

- In 2001, grade 4 scored an NPR of 62%, grade 8 a NPR of 57%, and grade 11 a NPR of 61%.
- In 2006, NPR scores for s 4, 8, and 11 were 72%, 60%, and 61% respectively.



**Table 1: 4, 8, 11 M**Math National Percentile Rank for each disaggregation across Montana in 2001-2006

	Grade 4			Grade 8				Grade 11										
Groups	2001	2002	2003	2004	2005	2006	2001	2002	2003	2004	2005	2006	2001	2002	2003	2004	2005	2006
All Students	62%	62%	64%	66%	71%	72%	57%	58%	59%	60%	61%	60%	61%	61%	62%	62%	62%	61%
Students Without Disabilities	66%	65%	67%	69%	74%	75%	60%	62%	63%	64%	64%	64%	64%	64%	65%	65%	65%	65%
Students With Disabilities	31%	31%	35%	40%	46%	43%	25%	23%	24%	27%	28%	25%	26%	26%	28%	26%	25%	27%
Female Students	60%	61%	63%	65%	70%	71%	58%	59%	60%	60%	62%	61%	60%	61%	62%	61%	62%	61%
Male Students	62%	63%	64%	67%	72%	73%	57%	57%	58%	60%	60%	59%	62%	62%	63%	63%	62%	61%
Native American Students	40%	40%	41%	46%	52%	53%	33%	32%	36%	37%	38%	37%	41%	39%	40%	39%	39%	41%
White Students	66%	65%	67%	69%	74%	74%	60%	62%	63%	63%	64%	63%	63%	63%	65%	64%	64%	64%
Students on Free/Reduced Lunch	51%	50%	53%	55%	62%	62%	45%	45%	45%	48%	48%	47%	49%	48%	50%	48%	49%	49%
LEP*	NA	29%	29%	37%	37%	40%	NA	24%	21%	26%	25%	28%	NA	34%	36%	32%	34%	32%

<sup>\*</sup>LEP 2001 data were incomplete.

Math: The table below shows the percentage of students for each disaggregation scoring in each performance category in grades 4, 8, and 11 for 2001-2006

		,	8, and 1 Grad				Grade 8				Grade 11			
		∞.	5		<u> </u>	<u> </u>				8 .5 4 .1				
Groups/Year		Adv Stanines 8- 9	<b>Pro</b> Stanines	NP Stanine 4	Nov Stanines	Adv Stanines 8- 9	<b>Pro</b> Stanines 5-	NP Stanine	Nov Stanines	Adv Stanines 9	<b>Pro</b> Stanines	NP Stanine 4	Nov Stanines 1-	
•	2001	14%	59%	14%	12%	15%	54%	15%	16%	17%	59%	12%	12%	
	2002	14%	58%	15%	13%	14%	54%	15%	17%	17%	59%	12%	12%	
All Students	2003	16%	59%	13%	12%	15%	55%	14%	16%	17%	60%	12%	11%	
An Students	2004	18%	60%	13%	10%	15%	56%	15%	15%	17%	58%	12%	13%	
	2005	22%	57%	12%	9%	16%	55%	14%	15%	17%	59%	12%	13%	
	2006	23%	56%	11%	9%	16%	54%	14%	16%	17%	57%	13%	13%	
	2001	16%	61%	13%	9%	16%	57%	15%	12%	18%	62%	11%	9%	
C4	2002	16%	61%	13%	10%	16%	58%	14%	12%	18%	62%	11%	9%	
Students Without	2003	17%	62%	12%	9%	16%	58%	14%	12%	18%	63%	11%	8%	
Disabilities	2004	19% 24%	62%	12%	7%	17%	60%	14%	10%	19% 18%	61%	11%	9% 9%	
	2005		59%	11%	6%	18%	59%	13%	11%		62%	11% 12%	9%	
	2006	26%	58%	10%	6%	18%	59%	13%	10%	19%	61%			
	2001	2%	34%	22%	42%	1%	19%	21%	59%	1%	23%	25%	52%	
Students With	2002	3%	31%	22%	44%	1%	19%	22%	58%	1%	22%	23%	54%	
	2003	4%	36%	22%	38%	1%	22%	21%	56%	2%	25%	22%	51%	
Disabilities	2004	6% 8%	40% 45%	23% 19%	32% 29%	2% 2%	23% 26%	23% 21%	53% 51%	1% 1%	24% 22%	22% 24%	53% 53%	
	2005	6%	39%	20%	34%	1%	21%	22%	56%	1%	22%	24%	52%	
	2006													
	2001	13%	60%	15%	12%	13%	57%	16%	14%	15%	63%	12%	10%	
	2002	13%	59%	15%	13%	13%	58%	15%	14%	14%	61%	14%	11%	
Female Students	2003	14%	61%	13%	11%	14%	58% 59%	14%	14%	14%	64%	12%	10%	
	2004	16% 20%	61% 59%	14% 13%	10% 8%	14% 15%	59% 59%	14% 14%	13% 13%	14% 15%	61% 62%	13% 12%	12% 11%	
	2005	22%	58%	12%	9%	14%	58%	15%	13%	15%	61%	13%	11%	
	2006												<b>!</b>	
	2001	16%	58%	14%	13%	16%	50%	15%	19%	20%	56%	11%	13%	
	2002	16%	57%	13%	14%	15%	51%	15%	19%	19%	56%	12%	13%	
Male Students	2003	17%	57%	14%	12%	15%	51%	15%	19%	20%	57%	11%	13%	
	2004	19% 24%	58% 56%	12% 11%	10% 9%	16% 17%	52% 52%	15% 14%	16% 17%	20% 19%	55% 55%	11% 12%	14% 14%	
	2005	25%	55%	11%	10%	17%	51%	14%	18%	19%	54%	12%	14%	
	2006													
	2001	4%	43%	23%	29%	3%	32%	21%	44%	5%	43%	19%	33%	
Native American	2002	4%	42% 44%	23% 21%	31% 29%	2%	31% 34%	21%	46% 38%	4%	41% 42%	22% 21%	33% 32%	
	2003	5%				5%				4%				
Students	2004 2005	7% 8%	48% 51%	21% 20%	25% 21%	3% 5%	38% 37%	22% 21%	36% 37%	4% 4%	42% 41%	20% 21%	34% 34%	
	2005	9%	50%	19%	21%	4%	37%	21%	38%	5%	43%	22%	31%	
	2006	16%	61%	13%	10%	16%	57%	14%	12%	19%	61%	11%	10%	
	2001	16%	61%	13%	10%	16%	57%	15%	12%	18%	60%	12%	10%	
	2002	17%	61%	12%	9%	16%	58%	13%	13%	18%	62%	11%	9%	
White Students	2003	19%	61%	12%	9% 8%	17%	58%	14%	11%	19%	60%	11%	10%	
	2004	24%	58%	11%	7%	18%	58%	13%	12%	19%	60%	11%	10%	
	2006	26%	57%	10%	8%	18%	57%	13%	13%	18%	59%	12%	11%	
	2001	7%	55%	18%	20%	7%	44%	20%	30%	9%	51%	17%	23%	
	2001	7% 7%	52%	18%	20%	7% 7%	44%	19%	30%	9% 8%	51%	18%	23%	
Students on Free/	2002	9%	55%	18%	19%	7% 7%	45%	19%	28%	8%	53%	18%	21%	
Reduced Lunch	2003	10%	56%	18%	17%	7% 7%	47%	21%		8%	49%	18%	24%	
Acqueeu Dunen	2004	13%	57%	16%	14%	7%	47%	20%	25% 26%	9%	51%	18%	22%	
	2006	13%	56%	15%	15%	8%	46%	19%	28%	9%	49%	18%	23%	
	2000	Na	Na	Na	Na		Na	Na	Na	Na	Na	Na	<u> </u>	
	2001	- Na 2%	Na 28%	Na 25%	1Na 45%	Na 2%	20%	20%	58%		30%	22%	Na 420/	
LEP *2001 LEP data	2002	2% 2%	30%	23%	45% 45%	2% 1%	20% 16%	20%	58% 61%	5% 7%	30%	24%	43% 39%	
were incomplete	2003	3%	41%	25% 25%	31%	1% 2%		22%	54%	7% 1%	33%	22%	44%	
were incomplete	2004	3%	38%	26%	34%	1%	22% 22%	23%	55%	1% 4%	29%	26%	41%	
	2005	5%	41%	20%	34%	2%	25%	22%	50%	3%	30%	24%	43%	

Table 3: 4, 8, 11 M
Customized Skills Reports: Montana Mathematics standards tested in the 2001-2006
Iowa Tests

	Standard	ard Use math		Use	Use	Understand	Understand	Use data	Use
		processes to solve problems, estimate and communicate		numbers	algebraic	shape and	and use	analysis,	patterns,
				and	concepts,	use	measurement	probability	relations
				operations	processes	geometry	attributes and	and	and
					and		processes	statistics.	functions
			29	67	language.	7*	9*	16*	NA
	of ms		29	07	10	7 .	9.	10.	NA
	# of Items								
e <b>4</b>		01	64%	64%	72%	66%	52%	63%	9
Grade 4	rre	02	64%	64%	72%	67%	51%	63%	59%
G	ညိ	03	65%	65%	73%	68%	52%	64%	60%
	Percent Correct	04	66%	66%	75%	70%	53%	65%	61%
	Pe	05	67%	68%	77%	78%	57%	69%	65%
		06	67%	69%	78%	77%	58%	69%	65%
	# of Items		42	81	18	7*	13*	19	4*
Grade 8		01	57%	53%	58%	53%	55%	68%	64%
rad	t t	02	56%	53%	58%	53%	55%	67%	64%
G	Percent Correct	03	56%	54%	58%	54%	54%	68%	65%
	Pe Co	04	57%	54%	59%	53%	54%	69%	66%
		05	57%	55%	59%	58%	55%	69%	68%
		06	57%	54%	60%	57%	55%	69%	69%
	# of Items		29	46*	15*	NA	7*	5*	5*
11		01	55%	56%	56%	NA	46%	62%	53%
Grade 1	nt ct	02	55%	56%	56%	NA	45%	62%	54%
Gr	Percent Correct	03	55%	57%	57%	NA	47%	62%	55%
	r C	04	55%	57%	57%	NA	46%	61%	54%
		05	54%	57%	57%	NA	46%	62%	54%
		06	54%	57%	57%	NA	45%	61%	54%

<sup>\*</sup> The Iowa Tests measure the knowledge dimension of the Montana Standard, but do not adequately measure the application aspect.

Tables 4a and 4b: 11 M
ACT Mathematics results for high school graduating classes of 2001-2006.

	Average Score All National	Average Score All Montana	Average Score White Montana	Average Score American Indian Montana
2001	20.7	21.3	21.6	17.1
2002	20.6	21.4	21.45	17.65
2003	20.6	21.4	21.7	17.1
2004	20.7	21.4	21.8	17.0
2005	20.7	21.5	21.9	16.9
2006	20.9	21.8	21.9	17.4

Number of Montana students in the 2001-2006 graduating classes participating in the ACT.

	<b>Total Montana Students</b>	White Montana	American Indian Montana
2001	6,641	5,699	319
2002	6,368	5,460	300
2003	6,470	5,514	282
2004	6,255	5,259	300
2005	6,178	5,154	312
2006	6,033	4,896	269

**Tables 5a and 5b: 11 M**SAT Mathematics results for the high school graduating classes of 2001-2006.

	Average Score All National	Average Score All Montana	Average Score White Montana	Average Score American Indian Montana
2001	514	539	541	468
2002	516	547	549	500
2003	519	543	545	473
2004	518	539	538	492
2005	520	540	541	502
2006	518	545	546	505

Number of Montana students in the high school graduating classes of 2001-2006 participating in the SAT.

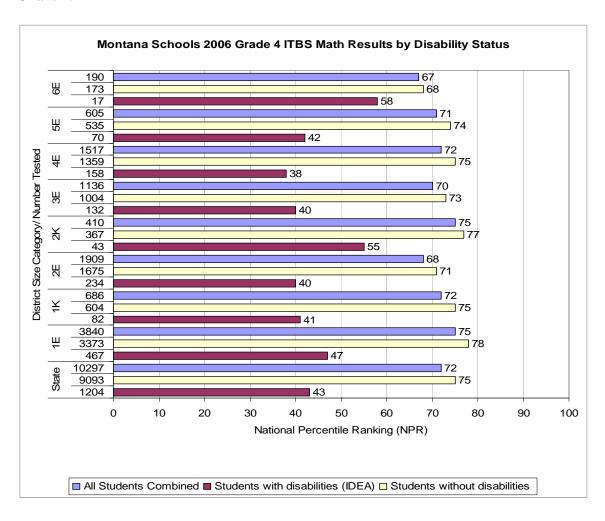
	<b>Total Montana Students</b>	White Montana	American Indian Montana
2001	2,762	2,342	39
2002	2,870	2,314	47
2003	3,207	2,375	43
2004	3,321	2,808	45
2005	3,326	2,818	43
2006	3,024	2,595	33

# **Table 6: 4, 8, 11 M**

NAEP data from 1996, 2000, 2003, and 2005 are included to add to the picture of student achievement in Math. Although NAEP data give us another perspective to the picture of Montana students tested in these years, it is not a statewide assessment, but rather a representative random sampling of the students in 4th and 8<sup>th</sup> grades in the years identified. Beginning in 2003, NAEP tests in Math in grades 4 and 8 are given in odd-numbered years.

			Averag	ge Score		
Grade:Year	All National	White National	American Indian National	All Montana	White Montana	American Indian Montana
4: 1996	224	232	216	228	231 (76%)	209 (43%)
4: 2000	228	236	216	230	234 (78%)	212 (49%)
4: 2003	234	243	224	236	238 (84%)	217 (55%)
4: 2005	237	246	227	241	243 (89%)	223 (62%)
8: 1996	272	282	264	283	287 (79%)	265 (55%)
8: 2000	275	286	255	287	290 (84%)	253 (41%)
8: 2003	276	287	265	286	289 (83%)	260 (48%)
8: 2005	278	288	266	286	290 (84%)	259 (48%)

Chart 4.1 M



#### 1. All students

■ The Math NPR for all Montana grade 4 students is 72%, one percentage point above 2005.

### 2. Students without disabilities

Statewide, the NPR for students without disabilities is 75%, one percentage point above 2005. That number is stable with all district size categories plus or minus 1-3 percentage points except district size category 6E which averaged 68%.

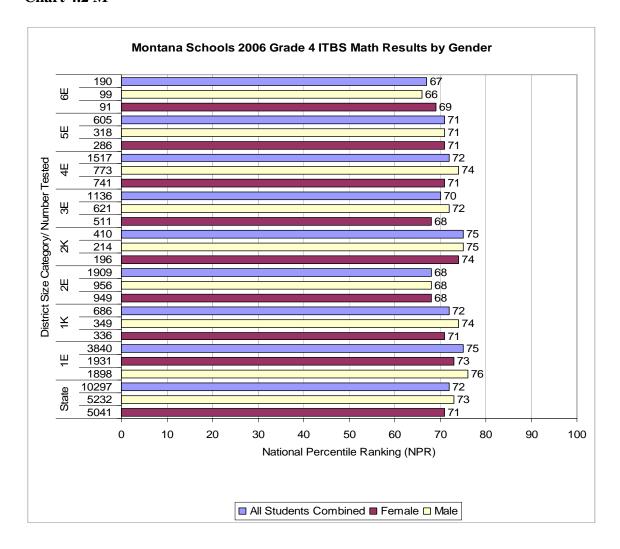
## 3. Students with disabilities

• Statewide, the NPR for students with disabilities is 43%, three percentage points below 2005. That number is somewhat stable with most district size categories plus or minus 1-5 percentage points except district size categories 2K and 6E where the number of students with disabilities is too small for comparisons.

## 4. Comparisons

• Statewide, Montana students without disabilities scored 32 percentage points above students with disabilities, 75% and 43% respectively.

Chart 4.2 M



# 1. All students

■ The Math NPR for all Montana grade 4 students is 72%.

#### 2. Female students

Statewide, the NPR for female students is 71%, one percentage point above 2005. That number is stable with all district size categories plus or minus 1-3 percentage points.

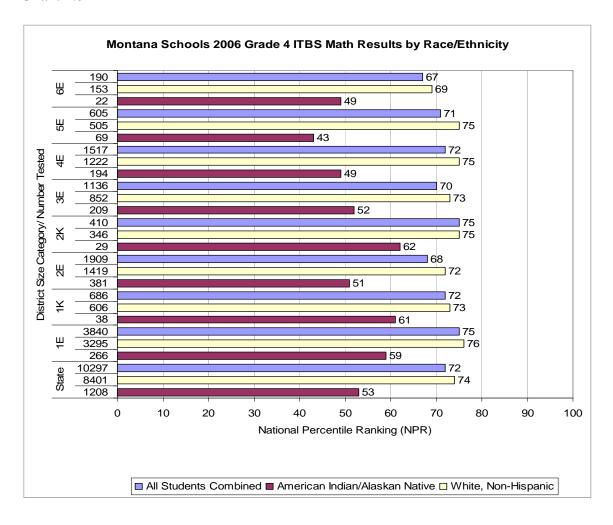
#### 3. Male students

Statewide, the NPR for male students is 73%, one percentage point above 2005. That number is stable with all district size categories plus or minus 2-5 percentage points except district size category 6E where the number of students is too small for comparisons.

#### 4. Comparisons

Statewide, male students scored two percentage points above female students,
 73% and 71% respectively.

#### Chart 4.3 M



#### 1. All students

■ The Math NPR for all Montana grade 4 students is 72%.

### 2. American Indian students

• Statewide, the NPR for American Indian students is 53%, one percentage point above 2005. That number is somewhat unstable with all district size categories plus or minus 1-11 percentage points.

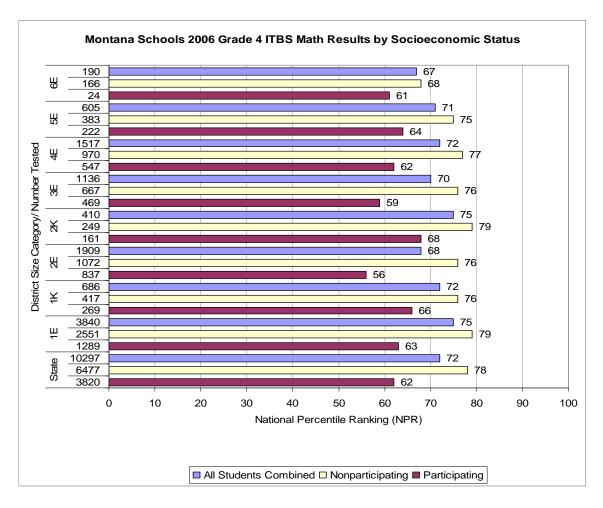
#### 3. White students

Statewide, the NPR for White students tested is the same as in 2005, 74%. That number is stable with all district size categories plus or minus 2-5 percentage points.

#### 4. Comparisons

• Statewide, Montana White students scored 21 percentage points above American Indian students, 74% and 53% respectively.

#### Chart 4.4 M



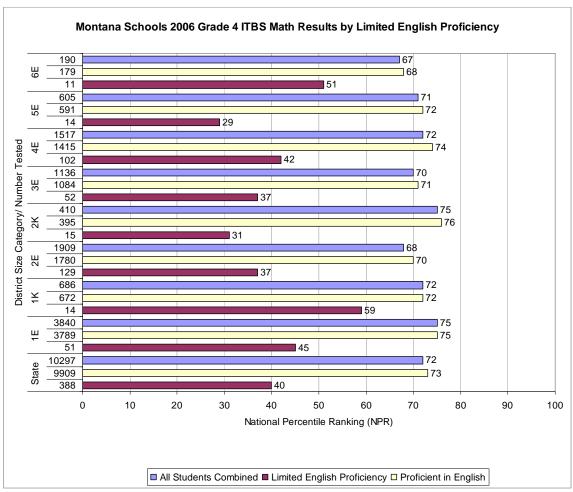
## 1. All students

- The Math NPR for all Montana grade 4 students is 72%.
- 2. Students participating in free/reduced lunch programs
  - Statewide, the NPR for students participating in free/reduced lunch programs is the same as in 2005, 62%. That number is stable with most district size categories plus or minus 1-4 percentage points except 2E and 2K which averaged 56% and 68% respectively.
- 3. Students not participating in free/reduced lunch programs
  - Statewide, the NPR for students not participating in free/reduced lunch programs is 78%, two percentage points above 2005. That number is stable with most district size categories plus or minus 2-4 percentage points except size category 6E with 68%

## 4. Comparisons

 Statewide, students not participating in free/reduced lunch programs scored sixteen percentage points above students participating in free/reduced lunch programs, 78% and 62% respectively.

#### Chart 4.5 M



<sup>\*</sup> To protect privacy, no results will be reported where the count of test takers is less than 10.

#### 1. All students

- The Math NPR for all Montana grade 4 students is 72%.
- 2. Students with limited English proficiency (LEP)
  - Statewide, the NPR for LEP students is 40% three percentage points above 2005. The NPR scores vary among school size categories because of the wide variation in the number of LEP students tested.

# 3. Comparisons

Statewide, all Montana students scored 32 percentage points higher than limited English proficient students, 72% and 40% respectively. That number varies among school size categories because of the wide variation in the number of LEP students tested.